

Listing of Claims

CLAIMS

1. (Original) A welding state detecting and transmitting device to be attached to a secondary side of a resistance-welding machine, the device comprising:

an electricity storage means for accumulating electric power to be supplied to components within the device;

a charging means for charging the electricity storage means by utilizing a portion of welding current supplied through the secondary side of the resistance-welding machine;

a sensor for detecting indices relating to welding state; and
a transmitting means for wirelessly transmitting data based on the indices detected by the sensor to an external device.

2. (Original) A device as set forth in Claim 1, wherein electricity storage means, the charging means, the sensor, and the transmitting means are formed in a unified manner.

3. (Original) A device as set forth in Claim 1, wherein the charging means has a coil provided around a conductor for supplying welding current, the coil being utilized to charge the electricity storage means.

4. (Original) A device as set forth in Claim 1, wherein voltage between a pair of conductors for supplying welding current is utilized for charging the electricity storage means.

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (New) A welding state detecting and transmitting device to be attached to a secondary side of a resistance-welding machine, the device comprising:

a sensor for detecting indices relating to welding state;

a transmitting means for wirelessly transmitting data based on the indices detected by the sensor;

a controlling means for controlling detection of welding state indices in accordance with detecting conditions stored within a memory;

a receiving means for receiving data wirelessly transmitted from an external device; and

a rewriting means for rewriting detecting conditions stored within the memory with a newly received data by the receiving means.

14. (New) A welding state detecting and transmitting device to be attached to a secondary side of a resistance-welding machine, the device comprising:

a sensor for detecting indices relating to welding state;
a transmitting means for wirelessly transmitting data based on the indices detected by the sensor;
a controlling means for controlling transmission of the detected welding state indices in accordance with transmitting conditions stored within a memory;
a receiving means for receiving data wirelessly transmitted from an external device; and
a rewriting means for rewriting transmitting conditions stored within the memory with a newly received data by the receiving means.

15. (New) A welding state detecting and transmitting device to be attached to a secondary side of a resistance-welding machine, the device comprising:

a sensor for detecting indices relating to welding state;
a transmitting means for wirelessly transmitting data based on the indices detected by the sensor;
a controlling means for controlling the welding state detecting and transmitting device in accordance with an operating program stored within a memory;
a receiving means for receiving an operating program wirelessly transmitted from an external device; and

a rewriting means for rewriting the operating program stored within the memory with a newly received operating program by the receiving means.

16. (New) A welding state detecting system comprising the welding state detecting and transmitting device as set forth in Claims 13, 14 or 15, further comprising an external device for receiving a transmitted data, wherein the external device comprises:

a receiving means for receiving the data wirelessly transmitted from the welding state detecting and transmitting device; and

a processing means for processing the received data and generating and outputting the processed data.

17. (New) A welding state detecting and transmitting device to be attached to a secondary side of a resistance-welding machine, the device comprising:

a sensor for detecting indices relating to welding state;

a memory for storing data based on the indices detected by the sensor;

a receiving means for receiving a data request signal wirelessly transmitted from an external device;

a means for extracting the data from the memory in accordance with the received data request signal; and

a means for wirelessly transmitting the extracted data to the external device.

18. (New) A welding state detecting system comprising the welding state detecting and transmitting device as set forth in Claim 17 and an external device for receiving a transmitted data, wherein the external device comprises:

a means for wirelessly transmitting the data request signal to the welding state detecting and transmitting device;

a receiving means for receiving the data wirelessly transmitted from the welding state detecting and transmitting device; and

a processing means for processing the received data and generating and outputting the processed data.

19. (New) A system as set forth in Claim 18, wherein the external device further comprises a control means for controlling the resistance-welding machine in accordance with the received data.

20. (New) A welding state detecting device to be attached to a secondary side of a resistance-welding machine, the device comprising:

an electricity storage means for accumulating electric power to be supplied to components within the device;

a charging means for charging the electricity storage means by utilizing a portion of welding current supplied through the secondary side of the resistance-welding machine; and

a sensor for detecting indices relating to welding state.